

LNP™ THERMOCOMP™ MC002 compound

Polypropylene

SABIC Innovative Plastics

Message:

LNP THERMOCOMP MC002 is a compound based on Polypropylene resin containing 10% Carbon Fiber. Added feature of this material is: Electrically Conductive.

Also known as: LNP* THERMOCOMP* Compound MC-1002

Product reorder name: MC002

General Information			
Filler / Reinforcement	Carbon Fiber,10% Filler by Weight		
Features	Electrically Conductive		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			ASTM D792
--	0.948	g/cm ³	
--	0.950	g/cm ³	
Molding Shrinkage			ASTM D955
Flow : 24 hr	0.70 to 1.0	%	
Across Flow : 24 hr	0.70 to 1.0	%	
Water Absorption			
24 hr, 50% RH	0.040	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.040	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	11200	MPa	ASTM D638
--	6300	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	35.6	MPa	ASTM D638
Yield	24.0	MPa	ISO 527-2/5
Break ³	36.7	MPa	ASTM D638
Break	35.0	MPa	ISO 527-2/5
Tensile Elongation			
Break ⁴	2.5	%	ASTM D638
Break	3.8	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁵	4710	MPa	ASTM D790
-- ⁶	9590	MPa	ISO 178
Flexural Stress			
--	77.0	MPa	ISO 178
Break, 50.0 mm Span ⁷	55.2	MPa	ASTM D790

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	48	J/m	ASTM D256
23°C ⁸	4.8	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	300	J/m	ASTM D4812
23°C ⁹	26	kJ/m ²	ISO 180/1U
Instrumented Dart Impact			
23°C, Total Energy	11.3	J	ASTM D3763
--	5.12	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	145	°C	ASTM D648
0.45 MPa, Unannealed, 64.0 mm Span ¹⁰	139	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	120	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹¹	116	°C	ISO 75-2/Af
Injection	Nominal Value	Unit	
Drying Temperature	82.2	°C	
Drying Time	4.0	hr	
Rear Temperature	193 to 204	°C	
Middle Temperature	216 to 227	°C	
Front Temperature	238 to 249	°C	
Processing (Melt) Temp	227 to 249	°C	
Mold Temperature	32.2 to 48.9	°C	
Back Pressure	0.172 to 0.344	MPa	
Screw Speed	30 to 60	rpm	
NOTE			
1.	50 mm/min		
2.	Type I, 5.0 mm/min		
3.	Type I, 5.0 mm/min		
4.	Type I, 5.0 mm/min		
5.	1.3 mm/min		
6.	2.0 mm/min		
7.	1.3 mm/min		
8.	80*10*4		
9.	80*10*4		
10.	80*10*4 mm		
11.	80*10*4 mm		

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